MULTIMEDIA UNIVERSITY

STUDENT ID NO

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# MULTIMEDIA UNIVERSITY

# FINAL EXAMINATION

**TRIMESTER 2, 2019/2020**

## DII5014 – INTRODUCTION TO INVESTMENT

(All Sections/Groups)

7 MARCH 2020
2:30 PM – 4:30 PM
(2 Hours)

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**INSTRUCTIONS TO STUDENT**

1. This question paper consists of 9 pages with 2 sections.
2. Attempt **ALL** questions.
3. Please write all your answers for Section A on the OMR form provided and all answers for Section B in the Answer Booklet provided.
4. The formulae are given in the appendices.

## SECTION A: Multiple Choice Questions (30 Marks)

1. Stocks show the representation of _____ in a business and a _____ type of investment.

   A. debt; direct
   B. ownership; indirect
   C. ownership; direct
   D. debt; indirect

2. Which of the following is a direct investment?

   A. Mutual funds.
   B. Exchange traded fund.
   C. Hedge funds.
   D. Real estate.

3. Derivative securities are neither debt nor equity and are derived from an underlying asset for example _____.

   A. bonds
   B. common stocks
   C. options
   D. real estate

4. Business firm is typically _____.

   A. not involved in the financial markets
   B. a demander of funds in the financial market
   C. the owner of the financial market
   D. a supplier of funds to the financial market

5. Funds in the financial markets are generally supplied by _____.

   A. both individuals and business firms
   B. business firms
   C. the government
   D. individuals

**Continued...**

6. Which of the following represent the **CORRECT** investment goals?

I. Sheltering income from taxes.
II. Increasing current income.
III. Saving funds for retirement.
IV. Setting aside enough cash to meet emergencies and basic needs.

A. I, II and III only.
B. I, II and IV only.
C. I, III and IV only.
D. II, III and IV only.

7. Rents from real estate, royalties and limited partnerships are examples of _____.

A. portfolio income
B. active income
C. non-taxable income
D. passive income

8. | Amount by which the proceeds from the sale of a capital asset are less than its original purchase price. |

The above statement is **MOST LIKELY** related to _____.

A. capital asset
B. capital loss
C. capital gain
D. capital venture

9. | Investors start to focus on family demands and responsibilities such as financing children's education expenses. |

The above statement is **MOST LIKELY** related to investors at _____ stage.

A. growth-oriented youth
B. middle-aged consolidation
C. retirement stage
D. business cycle

**Continued...**

10. A careful investor should consider _____ in selecting investments consistent with his/her goals.

    A. rates of return and taxes only
    B. risks, returns and taxes
    C. the pre-tax rate of return only
    D. annual dividends and taxes only

11. Short-term securities are bought and sold in _____.

    A. securities and exchange commissions
    B. money markets
    C. federal trade commissions
    D. capital markets

12. _____ is the market in which securities are traded after they have been issued meanwhile _____ is the market in which new issues of securities are sold to the public.

    A. Primary market; secondary market
    B. Secondary market; primary market
    C. Broker market; dealer market
    D. Dealer market; broker market

13. A private placement is the _____.

    A. initial offering of securities to the public
    B. offering of new securities to current shareholders
    C. sale of newly issued shares of stock to the general public
    D. sale of securities to a group of high net worth individuals

14. Initial Public Offering (IPO) of a company is the _____.

    A. market where stocks are created
    B. offering of the company's stocks to the public for the first time
    C. document of approval from Securities and Exchange Commission
    D. series of presentations to potential investors

**Continued...**

15. The preliminary prospectus available during the waiting period is known as a _____.

A. balance sheet
B. underwriting
C. prospectus
D. red herring

16. Jim purchased 200 shares of stock at a price of RM55 a share. He utilised his 60 percent margin account to make the purchase. What is Jim's initial equity in this investment?

A. -RM4400
B. RM4400
C. RM6600
D. -RM6600

17. Shakira bought 1,800 shares of stock for RM6.50 per share on 55 percent margin. Assume Shakira holds the stock for one year and the interest costs will be RM65 over that period. Shakira also received dividends amounting to RM0.85 per share. How much is Shakira percentage return on invested capital if she sells the stock for RM7 a share?

A. -8.78 percent.
B. 8.78 percent.
C. 33.67 percent.
D. 36.75 percent.

18. Jazli bought 350 shares of stock at a price of RM30 a share. He used his 65 percent margin account to make the purchase. Jazli sold his stock after a year for RM28 a share. Ignoring margin interest and trading costs, what is Jazli's return on investor's equity for this investment?

A. -10.25 percent.
B. -10.26 percent.
C. 10.25 percent.
D. 10.26 percent.

**Continued...**

19. _____ price is the lowest price at which a market maker is willing to sell a given security.

A. spread
B. ask
C. bid
D. broker

20.

| |
|---|
| Favourable markets. |
| Rising prices. |
| Investor/consumer optimism. |
| Economic growth and recovery. |
| Government stimulus. |

The above characteristics are **MOST LIKELY** related to _____ market.

A. bull
B. bear
C. broker
D. dealer

21. "A Ringgit received today is worth more than a Ringgit received in the future". This statement reflects the financial concept known as the _____.

A. total return concept
B. time value of money
C. historical dividend theory
D. expected yield factor

22. When calculating the future value of either a future single sum or a future annuity, the applicable interest rate is usually called the _____.

A. yield to maturity
B. discount interest rate
C. internal rate of return
D. premium rate

**Continued...**

23. _____ provides a basis for future expectations but does not guarantee future performance of a company.

A. Historical performance
B. Expected return
C. Total return
D. Inflation rate

24. Which of the following is **NOT** the advantage of holding period return?

I. Does not consider time value of money.
II. Easy to calculate.
III. Easy to understand.
IV. Considers income and growth.

A. I only.
B. I and II only.
C. II and III only.
D. II, III and IV only.

25. The realised return is the _____.

A. period of time over which an investor wishes to measure the return on an investment vehicle
B. current return actually received by an investor during the given return period
C. return that has been achieved but not yet realised
D. the relative size of investments being compared

26. Risk is defined as _____.

A. the chance that the actual return from an investment may differ from what is expected
B. having to trade a security in a broad market
C. having inflation erode the purchasing power of your investment
D. having declining price levels affect the reinvestment rate of your current income stream.

**Continued...**

**Questions 27 and 28 are based on below data.**

27.

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|---|
| Risk-free rate: 12% |
| Required return: 15% |
| Inflation premium rate: 6% |

Calculate the real rate of return.

A. 4 percent.
B. 5 percent.
C. 6 percent.
D. 7 percent.

28. With the new real rate of return, calculate the risk premium.

A. 2 percent.
B. 3 percent.
C. 4 percent.
D. 5 percent.

29. Marvel's stock commands a 9% risk premium. The markets in general are paying a 6% real rate of return with an expected inflation of 5%. What is the required rate of return on Marvel's stock?

A. 14 percent.
B. 19 percent.
C. 20 percent.
D. 23 percent.

30. The market's risk-free rate of return on common stock of Harry and Co. is 9%. The current real rate of return in the market is 5% and the required rate of return is 16%. What is the risk premium associated with Harry and Co. stock?

A. 6 percent.
B. 7 percent.
C. 8 percent.
D. 9 percent.

**Continued...**

## SECTION B: Structured Questions (70 Marks)

### QUESTION 1

| Stock | Amount Invested (RM) | Return (%) | Beta (β) |
|---|---|---|---|
| ABC | 35,000 | 8% | 1.3 |
| DEF | 15,000 | 16% | 0.9 |
| GHI | 25,000 | 11% | 1.2 |

Based on the above stock portfolios, answer below questions.

(a) Compute the return on portfolio. (7 marks)

(b) Compute the beta on portfolio. (7 marks)

(c) Based on your answer in (b), compute the portfolio return by using the CAPM model and below information

| |
|---|
| Risk free rate: 7% |
| Market rate of return: 12.5% |

(3 marks)

(Total: 17 marks)

### QUESTION 2

(a) For each of the following scenario, find the selling price and the number of shares after split.

i. Money Maker recently declared a 3 to 2 of stock split while the stocks currently sell for RM8.50 per share. Ahmad owns 700 shares of the stocks. (3 marks)

ii. Sulaiman's stocks underwent a stock split of 4 for 1. Currently, he owns 500 shares with price of RM36 per share. (3 marks)

iii. Mr. Gregory owns 1,000 shares of stocks that sell for RM12.60 per share and undergo a 2 to 1 of stock split. (3 marks)

(b) List and explain the **FOUR (4)** growth cycle stages in an investment. (8 marks)

(Total: 17 marks)

**Continued...**

## QUESTION 3

| Bond | Coupon rate (%) | Years to maturity | Years to call | Market price (RM) | Call price |
|---|---|---|---|---|---|
| STAR | 5 | 10 | 15 | 1,200 | 1,300 |
| MOON | 8 | 13 | 11 | 1,300 | 1,400 |

Based on the table above, compute:

(a) Yield to maturity for each bond. (9 marks)

(b) Yield to call for each bond. (9 marks)

(c) Which bond has a better yield to maturity and yield to call? (1 mark)

(Total: 19 marks)

## QUESTION 4

(a) Define mutual fund. (2 marks)

(b) Briefly explain **TWO (2)** advantages and **TWO (2)** disadvantages of mutual funds. (8 marks)

(c) BMF and NMF Fund currently have total liabilities of RM650,000 and RM700,000 respectively. Their NAV per unit is RM2.60 for BMF and RM2.90 for NMF with the same 800,000 total unit outstanding in the market. Calculate both funds' total asset. (7 marks)

(Total: 17 marks)

**End of Paper**

# Appendices

1. $\text{Margin} = \frac{V-D}{V}$

2. Return on invested capital from a margin transaction

$$= \frac{\text{Total current income received} - \text{Total interest paid on margin loan} + \text{Capital gain/loss}}{\text{Amount of equity at purchase}}$$

3. Risk-free rate = Real rate of return + Expected inflation premium

4. Required return on investment j = Risk-free rate + Risk premium for investment j

5. $\text{HPR} = \frac{\text{Income during period} + \text{Capital gain/loss during period}}{\text{Beginning investment value}}$

6. $FV = PV\,(1 + r\,)^n$

7. $D_1 = D_0\,(1 + g\,)^n$

8. $\text{Standard Deviation} = \sqrt{\frac{\sum_{t=1}^{n}(ri - \bar{r}\,)^2}{n-1}}$

9. $\text{Portfolio return} = \sum_{j=1}^{n}(w_j \times r_j)$

10. $r_j = R_F + [\, b_j \times (r_m - R_F)\,]$

11. $\text{Portfolio beta} = \sum_{j=1}^{n}(w_j \times b_j)$

12. $\text{EPS} = \frac{\text{Net Income} - \text{Preferred dividends}}{\text{Number of shares of common stock outstanding}}$

13. $\text{Dividend yield} = \frac{\text{Anual dividends received per share}}{\text{Current market price of the stock}}$

14. $\text{Dividend payout ratio} = \frac{\text{Dividends per share}}{\text{Earnings per share}}$

15. Total returns

= Current income + Capital gains/losses ± Changes in currency exchange rates

16. $\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$

17. Net working capital = Current assets – Current liabilities

18. Accounts receivable turnover = $\frac{\text{Annual sales}}{\text{Accounts receivable}}$

19. Inventory turnover = $\frac{\text{Annual sales}}{\text{Inventory}}$

20. Total asset turnover = $\frac{\text{Annual sales}}{\text{Total assets}}$

21. Debt-equity ratio = $\frac{\text{Long-term debt}}{\text{Stockholders' equity}}$

22. Time interest earned = $\frac{\text{EBIT}}{\text{Interest expenses}}$

23. Net profit margin = $\frac{\text{Net profit after taxes}}{\text{Total revenue}}$

24. ROA = $\frac{\text{Net profit after taxes}}{\text{Total assets}}$

25. ROE = $\frac{\text{Net profit after taxes}}{\text{Stockholders' equity}}$

26. P/E = $\frac{\text{Net price of common stock}}{\text{EPS}}$

27. PEG ratio = $\frac{\text{Stock's P/E ratio}}{\text{3-to-5 year growth rate in earnings}}$

28. Dividend per share = $\frac{\text{Annual dividend paid to common stock}}{\text{Number of common shares outstanding}}$

29. Payout ratio = $\frac{\text{Dividends per share}}{\text{Earnings per share}}$

30. Book value per share = $\frac{\text{Common stockholders' equity}}{\text{Number of common shares outstanding}}$

31. Price-to-book-value = $\frac{\text{Market price of common stock}}{\text{Book value per share}}$

32. Taxable equivalent yield = $\frac{\text{Yield on municipal bond}}{\text{1-Federal tax rate}}$

33. Taxable equivalent yield for both federal and state taxes

$$= \frac{\text{Municipal bond yield}}{1-[\text{Federal tax rate} + \text{state tax rate } (1 - \text{Federal tax rate})]}$$

34. Conversion value = Conversion ratio x Current market price of the stock

35. $\text{Conversion equivalent} = \frac{\text{Current market price of the convertible bond}}{\text{Conversion ratio}}$

36. Conversion premium (in RM)

= Current market price of the convertible bond – Conversion value

37. $\text{Conversion premium (in \%)} = \frac{\text{Conversion premium (in RM)}}{\text{Conversion value}}$

38. Payback period =

$$\frac{\text{Conversion premium (in RM)}}{\text{Annual interest income from the convertible bond} - \text{Annual dividend income from the underlying common stock}}$$

39. $\text{Current yield} = \frac{\text{Annual interest income}}{\text{Current market price of the bond}}$

40. $\text{Yield to maturity} = \frac{\text{Annual interest} + \frac{\text{Par value} - \text{Market price}}{\text{Number of years to maturity}}}{\frac{\text{Par value} + \text{market price}}{2}}$

41. $\text{Yield to call} = \frac{\text{Annual interest} + \frac{\text{Call price} - \text{Market price}}{\text{Number of years to call}}}{\frac{\text{Call price} + \text{market price}}{2}}$

42. $\text{Premium (or discount)} = \frac{\text{Share price} - \text{NAV}}{\text{NAV}}$

43. HPR =

$$\frac{(\text{Number of shares at end of period x Ending price}) - (\text{Number of shares at beginning of period x Initial price})}{\text{Number of shares at beginning of period x Initial price}}$$

44. $\text{NAV} = \frac{\text{Fund assets} - \text{Fund liabilities}}{\text{Number of units outstanding}}$